AMSAT News Service Weekly Bulletins
Issue: ANS-176
Date: 2017-06-25
Sources: amsat-ans-2017-ans-176-weekly-hyperkitty-bb51971ec5.txt

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AMSAT NEWS SERVICE
ANS-176

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-176.01
ANS-155 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 176.01
  From AMSAT HQ KENSINGTON, MD.
DATE June 25, 2017
To All RADIO AMATEURS
BID: $ANS-176.01

India Launches 40th PSLV With 31 Satellites On-board

An Indian mapping satellite and 30 other payloads vaulted into space Friday aboard a Polar Satellite Launch Vehicle, arriving in an on-the-mark orbit more
than 300 miles above Earth.

Launching on its 40th flight, the PSLV rocketed away from the Satish Dhawan Space Center, a facility nestled on Sriharikota Island on India’s east coast, at
0359 GMT Friday (11:59 p.m. EDT Thursday). The 144-foot-tall (44-meter) launcher
thundered into a mostly sunny sky over the launch base, where liftoff occurred
at 9:29 a.m. local time

The 1,570-pound (712-kilogram) Cartosat 2E satellite was the primary passenger
on Friday’s launch, joining a fleet of Earth-imaging platforms built to feed observations of cities, crops, natural disasters and other targets to Indian civil and military authorities.

Cartosat 2E radioed ground controllers moments after separation from the PSLV's
fourth stage, and engineers confirmed it unfurled its solar panels as planned.

The PSLV launch team confirmed the upper stage released another Indian satellite
– NIUSAT – a few seconds after Cartosat 2E. Designed for agricultural monitoring, NIUSAT is suitcase-sized satellite weighing about 33 pounds (15 kilograms) developed by students at Noorul Islam University in India's Tamil Nadu state.

Fifteen other satellites launched Friday also include amateur frequency downlinks:

Max Valier Satellite	145.860 MHz
Venta 1	437.325 MHz
Pegasus	436.670 MHz
NUDTSat	436.270 MHz
VZLUSAT 1	437.240 MHz
DragSail-CubeSat	437.300 MHz, 2403 MHz, and 2405-2445 MHz
UCLSat	435.975 MHz
InflateSail	436.060 MHz
URSA MAIOR	435.950 MHz
LithuanicaSAT 2	437.265 MHz
SUCHAI 1	437.225 MHz
Aalto 1	437.220 MHz and 2402.00 MHz
Robusta 1B	437.325 MHz
D-Sat	437.505 MHz
skCUBE	437.100 MHz and 2401 MHz

[ANS thanks SpaceFlightNow and the IARU for the above information]

ARISS SSTV Commemorative Activity

Special Slow Scan Television (SSTV) transmissions are expected to be made from
the International Space Station on 145.800 MHz FM around the weekend of July 15.

In commemoration of their 20th anniversary, the ARISS team is planning to transmit a set of 12 SSTV images that capture the accomplishments of ARISS over
that time.

The ARISS SSTV Blog says:

While still to be scheduled, we anticipate the SSTV operation to occur around
the weekend of July 15. We are planning for at least a 2 day operation, but are
working for a potential longer operation. Note that all of this tentative and
may change based on crew scheduling and ISS operations.

Starting with our first meeting in November 1996, our joint operations on Mir,
becoming the first operational payload on ISS in November 2000 to our 1103rd school contact (so far), ARISS' accomplishments have been tremendous. We have

touched the lives of many and inspired and educated countless students to pursue
science, technology, engineering and math careers.

Please stay tuned as more details on our SSTV event will be communicated in the
coming weeks. Please spread the word. And think about how you can get students
in your area involved in capturing these images. We would love to hear your
stories on how that goes.

[ANS thanks Frank, KA3HDO, for the above information]

LilacSat-1 Designated LilacSat-OSCAR 90

OSCAR Number Administrator Bill Tynan, W3XO, has announced that, pursuant to a request submitted to the AMSAT Board of Directors, the LilacSat-1 satellite has been assigned the designation LilacSat-OSCAR 90, or LO-90.

LilacSat-OSCAR 90 was designed and constructed by the Harbin Institute of Technology in Harbin, China as part of the QB50 project to study the lower thermosphere. It was carried aboard an Orbital-ATK Cygnus cargo ship, which was launched to the International Space Station on April 18, 2017, and deployed from the ISS on May 25, 2017.

LO-90 carries a voice transponder with a 145 MHz FM uplink and a 435 MHz digital voice downlink using the Codec2 open source voice codec as well as a camera open for activation by amateur radio operators worldwide.

More information about the satellite can be found http://lilacsat.hit.edu.cn/?page_id=594. A guide for receiving the downlink prepared by Adam Whitney, K0FFY, can be found at http://adamwhitney.net/working-lilacsat-1/.

Since the launch of the first amateur radio satellite, OSCAR 1 in 1961, it has been traditional for amateur radio satellites to carry the name OSCAR, for “Orbiting Satellite Carrying Amateur Radio”. AMSAT, which administers the numbering of OSCAR satellites at the request of the Project OSCAR organization, encourages all builders/owners of amateur radio satellites that meet the requirements listed at http://www.amsat.org/?page_id=2478 to apply for an OSCAR designation.

[ANS thanks Paul, N8HM, for the above information]

Amateurs Recover I-Inspire-2 Satellite

I-Inspire-2 is a 20 x 10 x 10cm CubeSat built by the University of Sydney in collaboration with the Australian National University and the University of New
South Wales (Sydney)

WIA News reports:

On board the tiny spacecraft is an experiment, part of the QB50 project, designed to “explore the lower thermosphere, for re-entry research and in-orbit demonstration of technologies and miniaturised sensors”, as reported in earlier editions of the WIA broadcast.

Its operational frequency was coordinated by IARU to be in the satellite segment of the 70cm amateur band.

It was placed in orbit from the International Space Station in late May. The deployment was successful; however there were no signs of life when the ground stations started looking for it. The engineering group quickly tested various scenarios on the engineering model only to come to the conclusion that, due to the extended delay in the deployment, the satellite’s battery was likely to be depleted and the satellite was trapped in an endless loop, trying to deploy its antenna.

The engineering group suggested that the satellite is still listening albeit with its antennas in the stowed position. This meant that the satellite command receiver might have difficulty receiving any signals from ground control stations. A set of commands were devised which, if received, would instruct the satellite to wait until the battery is charged before attempting to deploy its antenna. Both UNSW and ANU ground stations transmitted the recovery command to the satellite; however after a week or so of no success it was decided that more transmitter power was required to overcome the lack of receiver sensitivity caused by the still stowed antenna. A request for assistance was passed to EME operators around the world and many responses were received.

The greatest hope for a successful recovery was thought to be PI 9 CAM using high power and a 25 m dish, normally used for radio astronomy but also EME. They were scheduled to transmit on the weekend of June 10-11.

On Sunday June 11, during the morning pass, Rob VK1KW reported a strong signal every 30 seconds on I-Inspire-2’s frequency. Dimitris VK1SV who is part of the ANU team, verified reception from home around midnight. The following morning Dimitris drove to the ANU ground station and was able to send commands to the satellite for the first time since it was deployed. Many other radio amateurs around the world also reported reception of the beacon. The satellite had come back to life!

This is a wonderful example of successful collaboration between radio amateurs and the academic community. If a frequency outside the radio amateur

band had
been used, it is doubtful that the satellite would have been brought back to
life.

The crew of I-Inspire-2 wishes to thank all radio amateurs involved and is
looking forward to a successful collection of data for the scientific
experiment!

[ANS thanks WIA News and AMSAT-UK for the above information]

SARL/AMSAT SA SDR Workshop To Be Held In August

The date for the joint SARL/AMSAT SA workshop about enhancing the SDR
experience
has been set for Saturday 12 August 2017 at the National Amateur Radio
Centre.
The workshop will focus on getting more fun from a VHF SDR dongle. The
second
part of the workshop will focus on how to kick start the South African Radio
League monitoring of the increase in the RF noise floor level project
using the
SDR waterfall. Both a HF and VHF dongle will be available as well as a
memory
stick with the required SDR and some fun software.

More details will be published soon. If you are interested in attending the
workshops, please send an e-mail with your details to
admin(a)amsatsa.org.za and
you will be added to a mailing list to keep you up to date with details
of the
workshops in Gauteng and the Western Cape.

You are listening to a news bulletin of the South African Radio League. Take
your hand-held to work this week.

[ANS thanks SARL weekly news in English 2017-6-24 for the above information]

New Zealand’s KiwiSAT Update

Yes, we’re going into space and you can be part of it!

AMSAT_ZL has reached a staging point in the development of their satellite
project, KiwiSAT. We’re ready to go, ready to get up there!

The KiwiSAT Team has produced a fine unit ready to launch. Then came a
set-back.
Our critically important Leader of the KiwiSAT Engineering Team, Fred
Kennedy
ZL1BYP, was struck down and driven to endure many months of medical
procedures.
This has have left him unable to continue his important work. It’s time for
renewal.

Over time the support team has aged, drifting from their positions of
youth and
ability. Much has been achieved but all to no avail if KiwiSAT sits on a

shelf.
Can you help?

AMSAT-ZL is looking both to its members and to the general New Zealand amateur
radio population for a coordinator to join the team and lead the project through
this final stage. We're making history. We're going into space!

We need a volunteer "Orbit Insertion Team" consisting of a Launch Co-ordinator
and as many assistants as he/she requires to undertake the task of securing a
launch for KiwiSAT. This new team will also take over Fred Kennedy's leadership
responsibilities. In parallel, the established
KiwiSAT engineering team will continue their involvement, giving support along
the way.

Much of the new team's work will be organisational rather than hands-on
engineering. Involved is arranging final environmental testing of KiwiSAT,
identifying and negotiating a launch, attending the launch and attending to
funding for this final phase. Basic planning is complete, we need action.
Other tasks will undoubtedly be crop up however it is envisaged that the current
team will ensure the preparation of KiwiSAT to full flight status is completed.

Offers need to be received by 30 June 2017. The AMSAT-ZL Committee will then
appoint a team and leader. Offers can be advised to the AMSAT-ZL Secretary, 894
Ponga Road, RD 4, Auckland 2584 or by Email to iana(a)kcbbs.gen.nz or to myself
tdcarrell(a)gmail.com. Email either of us for more details.

Financial assistance is available to enable the successful applicant to meet for
a briefing with Fred in Auckland, July this year.

Thank you,
Terry, ZL3QL
President AMSAT-ZL

[ANS thanks Southgate and NZART for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,

Lee McLamb, KU4OS
ku4os at amsat dot org